

REMARKS/ARGUMENTS

In this amendment, claims 1, 12, and 19 are amended. No claims are canceled, and claim 23 is added. Thus, claims 1-23 will be pending.

Rejection under 35 USC § 103, Alston in view of Lee

Claims 1-11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alston (US 6,327,635) in view of Lee (US 6,650,096).

Claims 1-11

Claim 1 is allowable over the Alston in view of Lee as the proposed combination of Alston with the pulse width signal of Lee fails to teach or suggest all the elements of claim 1. For example, claim 1 recites wherein *"said control signal is in the form of a pulse train for switching said switching element for said first value of said supply voltage, so sensed, wherein said pulsed control signal has a duty cycle greater than 0% and less than 100%."*

In Alston, switches 310, 312 are turned On when a 3.3V supply voltage is available and are turned Off when the 3.3V supply voltage is not available. *See Alston*, FIG. 3 and col. 4 lines 35-50. Any other state besides always On (100% duty cycle) or always Off (0% duty cycle) would cause an incorrect voltage to be output on node 222. In contrast, claim 1 recites that *"said pulsed control signal has a duty cycle greater than 0% and less than 100%."*

For at least the reasons given, Applicant submits that claim 1 and its dependent claims 2-11 are allowable over Alston in view of Lee.

Claims 19-22

Claim 19 is allowable over the cited references, either alone or in combination, as those references fail to teach or suggest all the elements of claim 19. For example, claim 19 recites:

power distribution circuitry for connection to a power source solely through a two-pin connection to the power source, said connection providing a supply voltage between a voltage supply node and a ground node, said power distribution circuitry including:

a voltage sensing circuit, configured to sense, at least at a predetermined time, said supply voltage and provide a voltage indication signal based on the supply voltage, so sensed;

at least one DC-DC conversion circuit, connected to said voltage supply node and to an output node, for converting said supply voltage, so sensed, to a different desired output voltage when said supply voltage sensed at the voltage supply node is not the desired output voltage and providing said different voltage on said output node; and

a control circuit, coupled to said voltage sensing circuit and to said DC-DC conversion circuit for controlling said DC-DC conversion circuit depending on said supply voltage, so sensed, wherein when the sensed supply voltage is the desired output voltage, said control circuit controls the DC-DC conversion circuit to not convert the sensed supply voltage to a different voltage so that said sensed supply voltage is provided on said output node.

At page 7, the Office Action asserts that the power source selection circuitry 210 of Alston would be used in a hard drive due to the suggestion of Lee. In Alston, the power source selection circuitry 210 has a three-pin connector (3.3V, 5V, and ground). *See Alston*, FIG. 3 and col. 4 lines 29-52. Thus, even assuming that Lee provides the suggestion of using the circuitry 210 in a hard drive, this combination does not provide for "*a two-pin connection to the power source, said connection providing a supply voltage between a voltage supply node and a ground node*," as recited in claim 19.

Although only one supply voltage 3.3V or 5V needs to be provided, all three input lines need to be provided for the circuit to function properly. *See Alston*, abstract and col. 4 lines 29-52. Regardless of which voltage is supplied, the voltage node sensed is the 3.3V node. *Id.*, col. 3 lines 61-66. If there is no voltage on the 3.3V node, then the voltage at the 5V node is converted to 3.3V by voltage regulator 308 and sent to the output node 222. *Id.*, col. 4 lines 43-45. Thus, the sensed voltage (one at 3.3V) is not converted, but it is the 5V node that is converted. However, the voltage at the 5V node is not sensed. If there is a voltage on the 3.3V node, then that voltage is not converted but sent directly through switches 310, 312 to the output node 222. *Id.*, col. 4 lines 35-42. Accordingly, the combination does not convert "*said supply voltage, so sensed to a different desired output voltage*," as recited in claim 19.

Additionally, the advisory action cites the prior art of automatically stepping down a 5V supply voltage to a 3.3V voltage when only a 5V supply is available on a PC. *Id.*,

col. 1 lines 31-40. In these cards, a voltage sensing circuit does not exist as a 5V supply is assumed to be delivered, thus sensing is not done. Accordingly, this combination would not teach or suggest a "*voltage sensing circuit*," as recited in claim 19. Moreover, since the step down is done automatically, the conversion does not occur "*when said supply voltage sensed at the voltage supply node is not the desired output voltage*," as recited in claim 19.

Also, since only the 5V is supplied, the control circuit would not control the DC-DC conversion circuit to not convert the 5V supply. Furthermore, the 5V supply would not be provided to the output node as 3.3V is required, and not 5V. In contrast claim 19 recites "*wherein when the sensed supply voltage is the desired output voltage, said control circuit controls the DC-DC conversion circuit to not convert the sensed supply voltage to a different voltage so that said sensed supply voltage is provided on said output node*."

For at least the reasons given, Applicant submits that claim 19 and its dependent claims 20-22 are allowable over Alston in view of Lee.

Rejection under 35 USC § 103, Alston and Lee in further view of Shenai

Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alston in view of Lee in further view of Shenai (US 5,959,439).

Claims 20-22 depend upon claim 19 and are allowable for at least the same rationale as claim 19. Shenai is cited as teaching conversions of voltage between 12 and 5 volts for a hard disk. Even assuming that Shenai teaches this limitation and that there is a motivation to combine, this teaching does not make up for the deficiencies in Alston and Lee with respect to these claims.

Rejection under 35 USC § 102, Alston

Claims 12-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Alston.

Applicant submits that claim 12 is allowable over Alston for at least the same rationale as claim 19.

Applicant submits that claim 13, and its dependent claims 14-18, are also allowable for at least the same rationale as claim 19.

Appl. No. 10/788,911

PATENT

Amdt. dated June 22, 2007

Reply to Office Action of February 22, 2007 and the
advisory action mailed May 8, 2007

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

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